NOTE: The specific hook-up for every mold is different. For each mold, the connections and their proper sequence must be made and checked only by qualified personnel.

IV. Pre-Start Operating Procedures

A. Setting-Up the Mold for Production

1. Before the mold is opened for the first time, remove any mold parting line locks.
2. Open the mold and check the mechanical action of the:
   a. Core pulls
   b. Side action cams
   c. Ejection system
3. Be sure the nozzle radius and the sprue bushing radius match.
4. Move the injection unit nozzle against the mold sprue bushing to check the seating alignment.

V. Injection Mold Protection Procedures

A. Clamp Tonnage Setting

1. Do not use excessive clamp force.
   a. Excessive clamp force increases wear on both the machine and the mold.
   b. If the mold clamp area is small, you can indent or hob the platens and even deform the mold.
2. The clamp tonnage setting depends on:
   a. The projected area of the plastic in the mold.
   b. The cavity pressure.
   c. Typically:
      • Thick parts = 2 tons per square inch
      • Thin-walled parts = 4 tons per square inch
B. Clamp Speed Profile Settings

1. The clamp speed profile is another important machine setting for protecting the mold from unnecessary damage and wear.
2. When you first set the clamp speeds, be conservative. The mold should close quickly for most of the closing stroke, then slow down before it reaches the guide pins and slides, and certainly before the mold halves touch.

C. Mold Protection Settings

The mold protection setting prevents the mold from clamping on an obstruction. At a predetermined closing position the moving platen switches over from high speed close to slow speed and low pressure close. In order to detect any obstruction between the mold halves as they come together, either the closing pressure or the closing time is monitored during the low pressure close. Exceeding either the allowable closing pressure or closing time will stop the clamp.

NOTE: Setting the mold protection system is critical. Damaging a mold because the mold protection system was not properly set up is a costly mistake and can usually be prevented.

1. Assuming the mold halves have no obstructions, the switch over from low pressure close to high pressure should be set to occur at a point where the mold halves nearly touch.
   a. If the switch over point is too early, the mold is still open and can slam shut.
   b. If the switch over point is too late, it could cause false signals to the mold protection system.
VI. Injection Mold Set-Up Procedures

A. Ejector Speed

1. Hydraulic ejector machine settings:
   a. Speed
   b. Pressure
   c. Distance

2. Ejector piston controls.

For either hydraulic or mechanical ejection systems, do not allow the ejector plate to hit the support plate.

3. If the mold has a core pull system, check the system’s settings and functions.
   a. Sequence
   b. Speed
   c. Pressures
   d. Stroke

B. Dry Cycling

1. After all the mechanical mold and machine related functions are set, the machine can be dry cycled.

2. During dry cycling, the machine doesn’t inject any plastic into the mold. Check that the clamp and mold operate properly.
VII. Protecting The Mold From Damage During Production

Protecting the Mold

Molds look sturdy, but parts of them can be quite fragile. Ejector pins, cores, gates and polished surfaces can be easily damaged. Use care when transporting and installing the mold.